



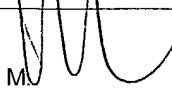
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,867	09/29/2003	George M. Zimmer	260006.444	6308
500	7590	10/04/2004		
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC 701 FIFTH AVE SUITE 6300 SEATTLE, WA 98104-7092			EXAMINER PAIK, SANG YEOP	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/674,867	Applicant(s) ZIMMER, GEORGE M. 	
	Examiner Sang Y Paik	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 27-32 is/are rejected.
- 7) ☒ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/15/04, 11/03/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 28, there is no proper antecedent basis for "the fifth and sixth surfaces".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5-7, 20, 24, 29 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Roller et al (US 4,371,777).

Roller et al shows a fluid heater including a first and a second bus plates (9), a plurality of PTC heating elements made of ceramic materials (10) with a first and a second conductive layers (11) or plates wherein the PTC elements are sandwiched between the conductive plates in an electrically parallel configuration, a first and a second electrically insulative pads (15), a fluid heating tube in a first heat exchanger block and in a second heat exchanger block (2), and the heat exchangers are in thermal contact with the fluid heater.

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5. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Nauerth (US 4,327,282).

Nauerth shows a heater including a first and a second bus plates (4), a plurality of PTC heating elements made of ceramic materials (1) with a first and a second conductive means (3) or plates wherein the PTC elements are sandwiched between the conductive plates in an electrically parallel configuration, and a first and a second electrically insulative pads (11).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 8-13, 15-19, 21-23, 27, 28, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roller et al (US 4,371,777) in view of Gusmer (US 3,782,456).

Roller et al shows the fluid heater claimed except a cavity formed in the surface of the heat exchanger to dispose and encase the heater therein.

Gusmer shows a heat exchanger with a heater disposed and encased within a cavity formed in the surfaces of the heat exchangers. Gusmer shows that the heater is in thermal contact with the surfaces of the heat exchangers where the heat exchangers have a non-planar surface mated together, and a chamber that is formed by the cavity conforms to the shape of the heater.

In view of Gusmer, it would have obvious to one of ordinary skill in the art to adapt Roller et al with a cavity formed on the surfaces of the heat exchanger to dispose and encase a heater therein so that better thermal transfer can be maintained without heat loss.

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With respect to claims 30 and 31, it would have been obvious to one of ordinary skill in the art to provide varying heating temperature to the fluid heater to produce a desired heating fluid including a liquefied gas since Roller et al leaves it to one of ordinary skill in the art many other various purposes with different heating powers.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roller et al in view of Gusmer as applied to claims 4, 8-13, 15-19, 21-23, 27, 28, 30 and 31 above, and further in view Mexiner (US 4,230,935).

Roller et al in view of Gusmer shows the fluid heater claimed except an aperture in communication with the cavity for supplying the electrical cable to the heating element.

Mexiner shows a housing with a cavity into which a PTC heating element is disposed therein with an aperture for coupling the electrical supply cable to the heating element therein, and, furthermore, a tube is provided around the cable to seal aperture as well as the electrical cable. In view of Mexiner, it would have been obvious to one of ordinary skill in the art to adapt Roller et al, as modified by Gusmer, with an aperture associated with the cavity so that electrical cable can be alternatively and more conveniently provided to the heater.

9. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roller et al (US 4,371,777) in view of Bohlender et al (US 4,814,584).

Roller et al shows the fluid heater claimed except an alignment mask.

Bohlender et al shows an alignment mask to hold a plurality of PTC heating elements in place as they further make electrical contact with the bus plates. In view of Bohlender et al, it would have been obvious to one of ordinary skill in the art to adapt Roller et al with the

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alignment mask to hold the PTC heating elements in place with respect to the bus plates so that a proper electrical contact can be made.

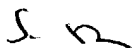
Allowable Subject Matter

10. Claims 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y Paik whose telephone number is 703-308-1147. The examiner can normally be reached on M-F (9:00-4:00) First Friday Off.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sang Y Paik
Primary Examiner
Art Unit 3742

syp